

2017 Q2

Market Research and Evaluation Quarterly Newsletter

IMPORTANT UPDATES:



What's New!

What's new? This Newsletter! The Market Research & Evaluation (MRE) Newsletter is designed to provide you with succinct updates about current MRE projects. We have organized this publication using two dimensions:

- By Sector (Residential, Commercial, Codes & Standards, Gas and Cross-Sector), so Program Managers can easily find an update of the projects that are most important to them
- By Project Lifecycle (Planning, Fielding & Reporting), so MRE Managers can easily see if and how our MRE projects might coordinate with their work

For each project you will find a brief summary of the objectives, research approach, sample population and MRE project manager contact information. Projects which are in field will also include the name of the vendor(s) we have contracted with and anticipated timing of the report. There will also be a link to any report that has been posted.

Because this is the first official issue of the MRE newsletter, we have included project summaries for any project that published a report in Q1, 2017.

In our next edition (Q3), we will start to post updates on the Residential Building Stock Assessment (RBSA) and the Commercial Building Stock Assessment (CBSA).

International Energy Program Evaluation Conference (IEPEC)

MRE team members going to IEPEC include: Corinne McCarthy, Sr. Manager; Anu Teja, Sr. Project Manager; Amy Webb, Project Manager; and Dulane Moran, Principal Evaluation Lead. If you are attending and would like to get together, feel free to reach out to those of us attending.

While you are there, don't miss these events on Tuesday, August 8th:

- Anu Teja will co-present with ILLUME Advising on the Natural Gas Segmentation study in a session called **Setting the Foundation for Strong Program Design and Evaluation using Descriptive Segmentation**
- Dulane Moran will moderate a panel discussion called **Evaluation Solutions for Large-Scale Midstream Interventions**
- Amy Webb will co-present with Evergreen Economics on **Issues in Residential HVAC and Appliances** sharing insights regarding **Gauging Consumer Appetite for Super-Efficient (Heat Pump) Dryers**

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Questions about this report may be addressed to:

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***PLANNING**: MRE projects from inception through proposal selection

***FIELDING**: MRE projects from kick-off through the completion of field work

***REPORTING**: MRE projects in the analysis/synthesis stage through report posting



Residential



Commercial



Codes & Standards



Natural Gas



Cross-Sector

	PLANNING*	FIELDING*	REPORTING*
Ductless Heat Pumps			✓
Heat Pump Water heaters			✓
Manufactured Homes			✓
Next Step Homes			✓
Residential Lighting			✓
Retail Product Portfolio			✓
Super-Efficient Dryers	✓		✓
Building Operator Certification			✓
Commercial Real Estate			✓
Commercial Window Attachments			✓
Commissioning		✓	
Green Motor Rewinds			✓
Luminair Level Lighting Controls	✓		
Reduce Wattage Lamp Replacement	✓	✓	
Top Tier Trade Allies	✓	✓	
Commercial Refrigeration Equipment & Furnace Fans	✓		
Energy Codes			✓
Oregon Commercial Code Evaluation		✓	
Customer Segmentation			✓
Gas Mid-Cycle Assessment		✓	
Hearth Market Characterization			✓
Rooftop HVAC			✓
Water Heaters		✓	

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Residential

PLANNING

Super-Efficient Dryers (SED)

The Super-Efficient Dryer team would like to better understand if and how to leverage multi-family dwellings in pursuit of Market Transformation. As such, MRE has initiated a two-phased market research project.

- Phase 1 (estimated completion: late July) MRE is working with Market Intelligence to determine which sub-set of multi-family dwelling units represent the largest opportunity for growth.
- Phase 2 will seek to understand the path-to-purchase, influencers, and the attitudes and barriers towards purchasing Super-Efficient Dryers for use in the most opportunistic sub-set of multi-family dwelling units.

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REPORTING

Ductless Heat Pumps (DHP)

MRE contracted Cadmus to perform the sixth Market Progress Evaluation Report (MPER). The report is currently being reviewed and will be published by August, 2017. The primary focus areas of this MPER are:

- Gaining a deeper understanding of the end user value proposition
- Identifying emerging trends in the market and with pricing
- Assessing the completeness of the data NEEA uses to guide the program

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Residential

REPORTING

Heat Pump Water Heaters (HPWH)

MRE contracted with Cadeo to execute a Market Progress Evaluation Report (MPER) with the following key objectives:

- Improve NEEA's understanding of the installer market
- Determine the market effects of the National Appliance Energy Conservation Act (*NAECA*) standard, in particular determine the type and prevalence of alternative “workarounds” to installing HPWHs in large tank scenarios
- Identify key indicators of diffusion (in addition to increasing share of emergency replacement market) and confirm where we are on the adoption curve
- Review and update the logic model

The report is currently being finalized and will be published in mid-August.

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Manufactured Homes

NEEA's Manufactured Homes program's business objective is to advance the voluntary energy efficiency standard for Northwest manufactured homes. In response to this need, MRE contracted with ArrowG to do a qualitative research study with the primary objective of generating insights that will help drive demand for efficient manufactured homes. In particular, NEEA sought to better understand:

- Path to Purchase
- Key Influencers of Purchase
- Hierarchy of Needs

This information will be used to hypothesize how to position the non-energy benefits of manufactured homes with the increased EE configurations that are most likely to compel purchase, including:

- The value and believability of these benefits relative to one another
- The best way to contextualize the benefits
- The most easily understood consumer language to articulate the above

[Link to report](#)

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Residential

REPORTING

Next Step Homes

The objective of the study was to inform intervention strategies designed to overcome the Next Step Homes initiative's barrier of consumer awareness. MRE contracted with ArrowG to execute qualitative research with recent purchasers of new construction homes in the Northwest region. The results in this report include:

- The new construction homeowner path-to-purchase
- Attitudes, influences and needs within the path-to-purchase
- The experiences and interactions with builders throughout the process
- Perceptions and attitudes regarding energy efficiency as a consideration during the construction process

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Residential Lighting

MRE contracted with both Cadeo and DNVGL to execute the latest study related to residential lighting. DNVGL conducted a shelf survey, and Cadeo conducted research among market actors and utility program managers. Cadeo also performed an analysis of the shelf survey data combined and sales data. The results of this study will be published in a report in early September, and will include results regarding, but not limited to:

- An assessment of the current state of the market for a variety of residential lighting products
- Market trends and anticipated legislation
- Utility program manager market research needs

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Retail Product Portfolio (RPP)

MRE contracted with Research Into Action (RiA) to execute a Market Test Assessment (MTA) for RPP with these primary objectives:

- Confirm that the NEEA intervention strategies are working as expected
- Identify any adjustment to initiatives that should be considered prior to start-up
- Ensure RPP is achieving scale and that internal processes for product review and portfolio management are working
- Test the viability of alternative evaluation strategies that could support the national program

The report is being reviewed internally, and MRE anticipates that it will be posted in August, 2017.

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Residential

REPORTING

Super-Efficient Dryers (SED)

The Super-Efficient Dryers team is working on intervention strategies to overcome the Market Transformation barrier of low consumer awareness of, and interest in, Super-Efficient Dryers. MRE contracted with ArrowG to execute qualitative research with:

- Recent purchasers of dryers
- Those who intend to purchase a dryer in the next 6 - 12 months.

The objective was to better understand attitudes, needs and approach to purchasing a dryer. The results in this report include:

- Use, attitudes and challenges associated with laundry, and dryers in particular.
- The dryer consumer's path-to-purchase, hierarchy of needs and unmet needs.
- Perceptions and attitudes about energy efficiency, ENERGY STAR®, dryer brands and the retail experience.
- The consumer value propositions created, a summary of consumer response to those statements, and conclusions regarding which statements hold the most potential.

[Link to report](#)

Super-Efficient Dryers (SED)

Based on previous research, NEEA's marketing team worked with their agency to create several messages to test with consumers. MRE contracted with ArrowG to implement a mixed method research study to understand which of the messages would be most likely to address the barrier of consumer awareness of, and interest in, Super-Efficient Dryers. This report includes:

- How well each of the messages scored on six key attributes: differentiation, strategic fit, relevance, category legitimacy, understanding and engagement.
- A summary of the qualitative response to the various elements (visuals, words and message) of each of the messages.
- Indicated actions regarding ways to optimize the message elements.

[Link to report](#)

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Commercial

PLANNING

Luminaire Level Lighting Controls (LLLC)

NEEA continues to collaborate with ETO to implement market research within LLLC pilot projects in commercial buildings. This research is planned and will kick-off in conjunction with the recruitment of the pilots. The primary research objectives are to understand:

- Market actor experience with LLLC selection, purchase, installation, commissioning, operations & maintenance
- Occupant experience, with emphasis on benefits and challenges
- Energy savings by LLLC component

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Reduced Wattage Lamp Replacement (RWLR)

The RWLR program team is interested in exploring additional ways that the distribution network might be leveraged to contribute to Market Transformation. As the team better defines its needs, MRE will be likely to be involved with research to help inform strategic direction.

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Top Tier Trade Allies (TTA)

In anticipation of NXT Level 2 training for Trade Allies, MRE is in the process of identifying a longitudinal research platform that will enable NEEA to use the Kirkpatrick Evaluation Methodology.

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Commercial

FIELDING

Commissioning

The objective of the Long Term Monitoring Report for Commissioning is to gather measures such as the penetration of commission and the number of certified providers so that savings can be determined. MRE contracted with Cadmus, and the field work is currently wrapping up. The report is expected to be posted during this quarter.

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Reduced Wattage Lamp Replacement (RWLR)

MRE contracted with Cadeo to execute a limited scope Market Progress Evaluation Report (MPER), which is currently in the field. The primary objective is to take a look back at the initiative's history and understand what interventions were most successful and why. Information is derived from distributor meeting notes, three data sources and interviews with NEEA and its implementation partners (D+R):

- No market actor interviews are currently scheduled.
- The market size will be updated using National Electrical Manufacturers Association (NEMA) data.

Fielding is expected to be completed by late July, and the report will be posted shortly thereafter.

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Top Tier Trade Allies (TTTA)

MRE contracted with Illume to execute an assessment of the effects of NXT Level 1 training on skills and practices of designees. Interviews are taking place with NXT Level 1 designees and utility stakeholders. The focus will be:

- To understand their perspective on the success of the program
- To provide input regarding the direction of NXT Level 2 training.

The research will be completed in the end of July, and the Progress Report will be posted shortly thereafter.

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Commercial

REPORTING

Building Operator Certification (BOC)

MRE contracted with Research Into Action (RiA) to perform a review of the BOC dataset of certified operators took place during January and February 2017. This report provides:

- An updated count of the number of active certified building operators for 2016 energy savings reporting (In 2016, the BOC program registered 157 new certificates).
- A brief update on the program's recent alignment with the ISO 17024 standard
- A year-by-year count of new, retired, and total active certificants.
- Suggested opportunities for further research.

[Link to memo](#)

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Commercial Real Estate (CRE)

The research team (Navigant and subcontractor Cadeo) conducted a Market Progress Evaluation Report (MPER), with the following primary research objectives:

- Conduct a market characterization
- Review the effectiveness of retrofit efforts in demonstration projects
- Assess the impact & effectiveness of the SPARK tool

[Link to report](#)

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Commercial

REPORTING

Commercial Window Attachments (CWA)

MRE contracted with Navigant to gain high level information into the Commercial Window Attachments market. The research objectives of this study are to:

- Confirm the hypotheses regarding barriers to market transformation
- Understand the go-to-market strategies of the key manufacturers
- Identify additional research needs

The report is currently being reviewed and is expected to be posted in August, 2017.

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Green Motor Rewinds

MRE contracted with Cadmus to update the number of rewinds and green motor rewinds by horsepower, sector and state so that savings can be calculated by NEEA's planning team. The results of this effort are captured in this Long Term Monitoring & Tracking Report.

[Link to report](#)

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Codes and Standards

PLANNING

Commercial Refrigeration Equipment & Furnace Fans

MRE initially planned to do a standards evaluation on Commercial Refrigeration Equipment & Walk-in Coolers & Freezers. However, the standards for Walk-In Coolers & Freezers have not been approved. As such, Furnace Fans Standards will be evaluated instead of Walk-In Coolers & Freezers. Last week the TRC Energy Consulting proposal for this work was approved. The kick-off is expected to occur in mid-August.

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FIELDING

Oregon Commercial Code Evaluation

MRE has contracted with Ecotope to execute the evaluation of Oregon Commercial Codes. The sample design and data collection approach are complete, and customer communication protocol are expected to be completed by the end of July. A pre-test is underway, which is intended to ensure that the audit form is relevant & workable; and that the new, automated form will provide the appropriate level of quality control.

When the pre-test is complete (late July, 2017) a memo will be written to document the findings. If the pre-test does not uncover major issues, training for the technical data collection team will begin, and will run from mid-August through late January. The data collection is expected to run from mid-August thru late January / early February. If the pre-test unearths major issues with the software, forms or processes, adjustments will be made and re-tested if necessary. This would also change the data collection timeline.

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Codes and Standards

REPORTING

Energy Codes

MRE contracted with Navigant to conduct an evaluation of the Energy Codes progress in achieving its goals. The focus of the evaluation was on codes efforts undertaken in the Northwest since 2011. This Market Progress Evaluation Report (MPER) focuses on the following:

- The program logic model
- Cost effectiveness assumptions used to estimate program influence
- Program progress achieved
- Effectiveness of processes implemented.

[Link to report](#)

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Natural Gas

FIELDING

Gas Mid-Cycle Assessment

MRE contracted Opinion Dynamics to execute retrospective/prospective mid-cycle assessment of the Natural Gas Initiative. The key objectives of this research are to:

- Gauge the impact NEEA has had on product advancements within the Natural Gas Portfolio
- Assess progress made on the development of a pathway to cost-effective energy savings
- Determine if there is evidence of market transformation
- Track NEEA's adherence to the key principles of operation in the Natural Gas Business Plan
- Identify the value proposition that stakeholders find in the Natural Gas Business Plan
- Assess the overall health of NEEA as a dual-fuel organization

The assessment is currently underway, and the final report is expected to be posted in September, 2017.

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Natural Gas

REPORTING

Customer Segmentation

MRE contracted with Illume to execute research that will characterize the natural gas consumers within the purview the Natural Gas funders and Energy Trust of Oregon. Based on the research, Illume identified four key consumer segments that will be used to support the development of natural gas initiatives. In this report, the segments are characterized by their:

- Use and attitudes about natural gas in their homes
- Overall demography and lifestyle
- Drivers and barriers to adoption of high efficient natural gas products

[Link to report](#)

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Hearth Market Characterization

MRE contracted with Russel Research to understand the natural gas hearths market in the Northwest. The objective of the research was to gain a deeper understanding and expand upon our current knowledge of the supply and demand sides of this market. Through a combination of in-depth qualitative and quantitative techniques, the report examines:

- Existing interdependencies and current trends within the supply chain
- Owner satisfaction and usage experiences with their units
- Motivators for purchasing units among owners, and those intending to purchase a unit
- Opportunities to reduce market barriers to adoption of efficient natural gas products

[Link to report](#)

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Rooftop HVAC

MRE contracted with Evergreen Economics to execute research that would help the Natural Gas team understand the potential for high efficiency gas fired condensing rooftop HVAC units. Research objectives captured in this report include:

- Identifying the supply side market structure for Rooftop HVAC units in commercial retrofit settings
- Understanding the brand relevance in this space
- Gaining a deeper understanding of the installers' awareness, attitudes, behaviors and challenges associated with these units

[Link to report](#)

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Cross-Sector

FIELDING

Water Heaters

The Natural Gas & HPWH teams both need an updated market characterization study. MRE has approved Russel Research's proposal to do a comprehensive market characterization study of the water heater market, and the kick off meeting occurred in early July. The primary objectives of the study are to:

- Understand the supply chain's approach to filling demand, positioning the wide variety of products to their end users, and attitude about new products
- Understand the end -user path to purchase, product perceptions and trusted sources of information
- Update the challenges and barriers associated with HPWH
- Provide estimates of the residential and commercial market size

Water Heaters cont...

Russel Research will be implementing the qualitative and quantitative methods below during late Q2 through early Q3:

- In-depth Telephone Interviews with supply chain market actors: distributors, manufacturer sales representatives, retailers and installers), residential consumers, commercial property managers
- Three -Day On-Line Bulletin Board of residential consumers
- On-Line Quantitative Survey of Residential Consumers and Commercial Property Managers/Owners

The report of findings is expected to be published in Q4

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Building Operator Certification,
Ductless Heat Pumps, Heat Pump
Water Heaters, Super-Efficient Dryers



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Customer Segmentation, Gas Mid-
Cycle Assessment, Hearth Market
Characterizations, Residential
Building Stock Assessment, Rooftop
HVAC, Water Heaters



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Assessments, Ductless Heat Pumps,
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Refrigeration Equipment & Furnace
Fans, Energy Codes, Manufactured
Homes, Oregon Commercial Code
Evaluation



TOGETHER We Are Transforming the Northwest

